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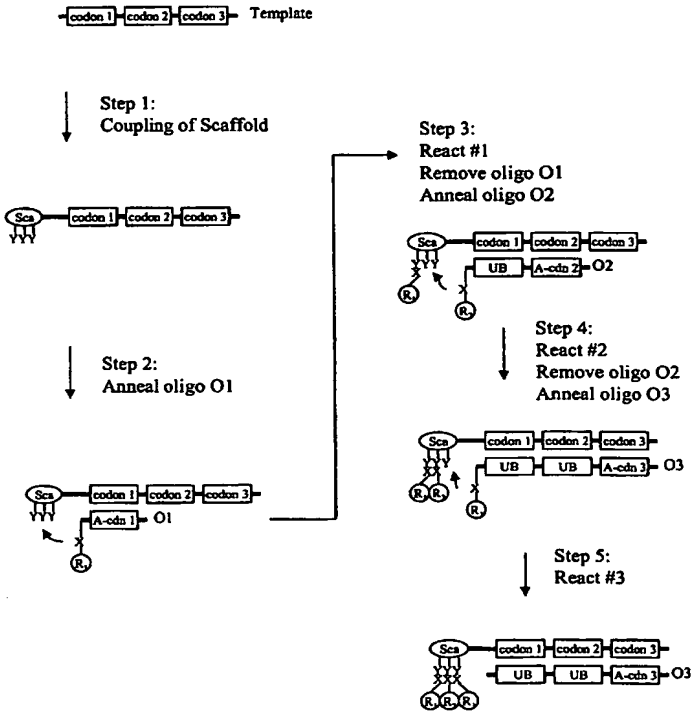
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[Continued on next page]

(54) Title: PROXIMITY-AIDED SYNTHESIS OF TEMPLATED MOLECULES



(57) Abstract: Disclosed is a method for synthesising a bifunctional complex. The complex comprises a template as well as a molecule, the synthesis of which being directed by the template. The synthesis of he complex requires initially a) a template comprising two or more codons in sequence, a first pair of a molecular affinity pair, and a reactive group; and b) two or more building blocks, each building block comprises i) an anti-codon capable of recognising a codon of the template, ii) a functional entity comprising at least one reactive group, and iii) a linker connecting the anti-codon and the functional entity, wherein building blocks having anti-codons intended to interact with codons of the template distal to the reactive group comprise as a section of the linker a second part of the molecular affinity pair. The synthesis proceeds by c) contacting the template with a building block under conditions which allow specific hybridisation of the anti-codon of the building block to the codon of the template, and under conditions ensuring assembling of the parts of the molecule pair, if present; d) obtaining a connection between the functional entity of the building block and the template by a reaction involving the template reactive group and the functional entity reactive group, e) cleaving a linkage to obtaining a nascent templated molecule, f) separating the parts of the molecular affinity pair, and g) repeating, for a building block having an anti-codon capable of hybridising to a new codon, steps c) to f) one or more times. The complexes obtainable according the invention may be used in the generation of a library which may be enriched with regard to preferred complexes using molecular evolution techniques.

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Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
WPI Data, PAJ, CAB Data, SEQUENCE SEARCH, BIOSIS, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	GARTNER Z J ET AL: "Multistep small-molecule synthesis programmed by DNA templates" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US, vol. 124, no. 35, 4 September 2002 (2002-09-04), pages 10304-10306, XP002265219 ISSN: 0002-7863 the whole document	47

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
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